

Application No.: 10/774,565
Amdt. Dated Feb. 10, 2004

Case 5887D

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claims 1 – 15 (Cancelled)

Claim 16. (Currently Amended): A method of measuring temperature in a furnace comprising:

positioning a pyrometer having an optical head in a port of the furnace, with a line of sight intersecting a passage of gas in the furnace containing a plurality of gas components;

receiving infrared radiation from the gas as it passes the line of sight;

converting the infrared radiation in the optical head to electrical signals; and

providing a photometer circuit connected to the optical head for processing electrical signals;

providing a scaling circuit connected to the photometer circuit for scaling the electrical signals;

scaling the electrical optical signals to maximize signals generated by infrared radiation which is semi-transparent to the gas components;

providing an output circuit connected to the scaling circuit for receiving electrical signals and producing output signals; and

providing an output means connected to the output circuit for displaying the output signal as a temperature measurement.

Claim 17. (Original): A method according to claim 16 including scaling the electrical signals for infrared radiation in a wavelength range of about 1.3 to about 3.1 microns.

Claim 18. (Original): A method according to claim 17 including scaling the signals for infrared

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wavelengths of about 1.38 microns for sensing the temperature of H₂O as the gas component ~~trade~~.

Claim 19. (Original): A method according to claim 16 including scaling the electrical signals for wavelengths between 1.8 and 3.1 for measuring the temperature of mixtures of H₂O, CO₂ or mixtures thereof.